

WHAT IS CLAIMED IS:

1. A method of handling data packets in a series of stacked network switches,
said method comprising:

placing incoming packets into an input queue of a first stacked network switch;

applying the input data packets to an address resolution logic engine;

5 performing a lookup to determine whether certain packet fields are stored in a
lookup table;

determining whether a result of the lookup provides a trunk group ID for a
particular data packet of said input data packets;

when the lookup provides a trunk group ID:

10 using the trunk group ID to determine an egress port,

determining if the egress port is found on said first stacked network switch;

setting a stacked tag on said particular data packet if the egress port is not
found on the first stacked network switch; and

forwarding said particular data packet to the egress port; and

15 when said lookup does not provide a trunk group ID:

discarding, forwarding, or modifying the packet based upon the result. of
the lookup.

2. A method of handling data packets as recited in claim 1, wherein said step
of using the trunk group ID to determine an egress port comprises using the trunk
group ID as an index to perform a lookup on a trunk group table to obtain said
egress port.

3. A method of handling data packets as recited in claim 2, wherein the lookup on the trunk group table results in a rules tag, where the rules tag define a criterion to be used to select the egress port.

4. A method of handling data packets as recited in claim 2, further comprising the steps of:

defining a group of ports as being linked together in said trunk group table;

and

monitoring the statuses of said group of ports.

5. A method of handling data packets as recited in claim 4, further comprising updating said trunk group table when the status of one of the group of ports changes.

6. A method of handling data packets as recited in claim 1, further comprising the steps of determining whether the particular data packet is a broadcast data packet and selecting one port of a group of ports defining a trunk group as the egress port.

7. A first stacked network switch for handling data packets configured in connection with a series of stacked network switches comprising:

an input queue for placing incoming packets into;

an address resolution logic engine;

5 means for performing a lookup to determine whether certain packet fields are

stored in a lookup table;

means for determining whether a result of the lookup provides a trunk group ID for a particular data packet of said input data packets;

means for determining whether the trunk group ID is found on said first stacked
10 network switch ;

means for setting a stacked tag on said particular data packet; and

means for discarding, forwarding, and modifying the packet based upon the result of the lookup;

wherein if the lookup provides a trunk group ID, the means for discarding,
15 forwarding, and modifying the packet is configured to use the trunk group ID to determine an egress port and forwards said particular data packet to the egress port and wherein the means for setting a stacked tag sets the stacked tag on said particular data packet when the trunk group ID is not found on said first stacked network switch.

8. A network switch for handling data packets as recited in claim 1, wherein the means for discarding, forwarding, and modifying the packet is configured to use trunk group ID as an index to perform a lookup on a trunk group table to obtain said egress port.

9. A network switch for handling data packets as recited in claim 7, further comprising:

means for defining a group of ports as being linked together in said trunk group table; and

5 means for monitoring the statuses of said group of ports.

10. A network switch for handling data packets as recited in claim 9, further comprising means for updating said trunk group table when the status of one of the group of ports changes.

11. A network switch for handling data packets as recited in claim 7, further comprising means for determining whether the particular data packet is a broadcast data packet and means for selecting one port of a group of ports defining a trunk group as the egress port.

12. A method of handling data packets in a network switch, said method comprising:

placing incoming packets into an input queue;

applying the input data packets to an address resolution logic engine;

5 performing a lookup to determine whether certain packet fields are stored in a lookup table;

resolving mirroring fields of said incoming data packets;

discarding, forwarding, or modifying the packet based upon the result of the lookup;

10 forwarding said incoming data packets to mirroring ports based on said mirroring field.

13. A method of handling data packets as recited in claim 12, further comprising determining if said mirroring ports are local to the network switch when

several networked switches are stacked together.

14. A network switch for handling data packets in a network switch, said method comprising:

an input queue for placing incoming packets into;

address resolution logic engine;

5 means for performing a lookup to determine whether certain packet fields are stored in a lookup table;

means for resolving mirroring fields of said incoming data packets;

means for discarding, forwarding, and modifying the packet based upon the result of the lookup; and

10 means for forwarding said incoming data packets to mirroring ports based on said mirroring field.

15. A method of handling data packets as recited in claim 14, further comprising means for determining if said mirroring ports are local to the network switch when several networked switches are stacked together.